

Knee's arthroplasty "Endomodel" : our experience

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Knee's arthroplasty "Endomodel" with tibial rotation is a partial locked prosthesis based on low friction's principle.

The "Endomodel" arthroplasty is characterized for:

- long survival, on account of its structural conception;
- great versatility owing to its usefulness in many anatomopathologic cases;
- minimal training, in consequence of easy operating technique and of tolerance's margin in mistakes.

Those peculiarities allowed, in the experience ripened in Orthopaedic and Traumatologic Clinic of University of Palermo, a progressive extension about the "Endomodel prosthesis" use, in particular in patients suffering from rheumatoid arthritis or severe osteofitosis or over seventy years.

This prosthesis can be used also in poor participating patients or in subjects with no good general conditions.

The authors refer to their casuistry and obtained results.

References:

Engelbrecht E.: The tibial rotating knee prosthesis Endomodel: surgical technique. *J. Orthop. Surg. Techn.*, 1997; 3: 83-97.

Nieder E.: Sled prosthesis, rotating knee and hinge prosthesis model St. George and Endomodel. *Orthopade*, 1991; 20: 170-180.

Otorhinolaryngology Head and Neck Surgery

PLANNING NECK DISSECTION AFTER ALTERNATING CHEMORADIO THERAPY FOR ADVANCED HEAD AND NECK CANCER

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Introduction

In head and neck squamous cell carcinoma (HN-SCC), treatment of the neck is strictly correlated to the management of the primary lesion. Thus, if, based on the stage and site of the primary lesion, definitive radiotherapy (RT) is selected, the neck is usually treated accordingly. Neck dissection (ND) may be required to salvage RT failures. To be safe and effective, surgery should be performed for residual disease within 2-3 months from the end of RT. Previous experiences clearly show that if ND is attempted at the time of overt progressive disease, results are poor. On the other hand, criteria for selecting patients with residual disease at the end of RT are controversial with some Authors in favor of systematic ND after moderate dose RT, and others only in patients with less than complete response in the neck. When chemotherapy is part of the treatment, the selection of patients for neck surgery after treatment is even more controversial. In the present analysis we looked at neck control probability to try to clarify whether surgery is needed if chemotherapy is added to moderate dose RT.

Materials and Methods

To investigate the value of nodal response at completion of alternating chemoradiotherapy a group of 43 patients was reviewed. Patients were treated with 60 Gy alternated with 4 cycles of cisplatin and fluorouracil. All patients had lymph nodes positive for SCC from various primary sites, underwent CT for staging and evaluation of response. Primary sites were as follows: oral cavity, 4/43 (9%); oropharynx, 19/43 (44%); nasopharynx, 8/43 (19%); larynx, 4/43 (9%); hypopharynx 8/43 (19%). The stage of primary tumor

was: T1, 1/43 (2%); T2, 6/43 (14%); T3, 17/43 (40%); T4, 19/43 (44%). N stage was as follows: N1, 14/43 (33%); N2c, 10/43 (23%); N3, 8/43 (19%).

Results

After chemoradiotherapy alone, 2-yr neck control probabilities (NCP) are $86 \pm 13\%$, $58 \pm 10\%$ and 0 for N1, N2a/b and N3 stages, respectively ($p=0.038$). Two-year NCP for 25 complete responders is $85 \pm 8\%$, while, at the same time interval, it is $17 \pm 9\%$ for 18 partial responses ($p<0.0001$). Within patients with N1-2a/b neck disease, 21 complete responders had a 2-yr NCP of $92 \pm 8\%$. Five (11%) hemineck in 4 patients developed severe (RTOG grade >2) subcutaneous late reactions

Conclusion

For patients with N1-2a/b neck disease, response at the end of treatment as evaluated by both physical exam and CT is a reliable criterion to select patients for complementary surgery even after chemoradiotherapy. For N3 disease, planned neck dissection regardless of response seems warranted.

RECONSTRUCTIVE HEAD AND NECK SURGERY: PERSONAL EXPERIENCE WITH PEDUNCULATED AND REVASCULARIZED FREE FLAPS

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INTRODUCTION Malignant tumours of the head and neck present notable curative problems regarding the surgical technique of removal and the reconstructive phase. In fact, the extensiveness of surgical demolition causes notable functional and aesthetic damage in all cases. The type of surgical exposure and modalities of reconstruction can be effected in various ways. In the present contribution we present our experience of reconstructive surgery with pedunculated and revascularized free flaps.

METHODS From 1994 to 1998 in our Department, we performed 34 pedunculated flaps and 2 revascularized free flaps in 28 patients with epidermoid carcinomas, with various degrees of differentiation, arising from the oral cavity and oropharynx, larynx, external nose, superior lip and in one patient with a cheloid scar after tracheotomy.

Among the 34 peduncled flaps we employed: 17 miocutaneous flaps, (15 of the major pectoralis muscle, 1 of the latissimus dorsi, and 1 of the trapezius) for the laryngeal, ipo-oropharyngeal and oral cavity reconstruction; 10 fasciocutaneous flaps (8 forehead and 2 delto-pectoral) for the nasal and ipopharyngeal reconstruction; 3 cutaneous flaps (2 nasolabialis and 1 with expanded sternal skin) for nasal, lip and jugular region reconstruction; 4 muscular flaps (3 of the temporal and 1 of the sternocleidomastoid muscles) for maxillary and oropharyngeal reconstruction. We used 2 revascularized free flaps for oral and oropharyngeal reconstruction, as follows: a radial forearm flap after tongue subtotal resection and a rectus abdominis flap to repair a complete cheek excision.

RESULTS Regarding survival rates in the 28 patients, 6 patients died from T and/or N recurrence, 2 died from post-operative complications and three due to natural events. For the head and neck reconstructive surgery success, except for 2 patients who died from post-operative complications, two developed total flap necrosis (one miocutaneous flap of the major pectoralis muscle and one forehead flap) and two developed partial necrosis (miocutaneous flaps of the major pectoralis muscle). Partial necrosis occurred in the 2 revascularized free flaps.

CONCLUSIONS In our experience the final outcome of the reconstructive surgery is strongly influenced by the stage of advancement of the tumour and the general condition of the patient. It is very important to inform the patient and his relations completely regarding the functional and aesthetic problems connected with surgical treatment with pedunculated and revascularized free flaps. During the postoperative period the patients must also be under strict control from the point of view of antibiotic and vasodilator therapy, local medication and nutrition.

EGFR STATUS: AN INDEPENDENT PROGNOSTIC FACTOR OF METASTASIS FREE SURVIVAL

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INTRODUCTION: In laryngeal squamous cell carcinoma (LSCC) the evolution of the development of regional metastases on the basis of clinico-pathological parameters is still inadequate. EGFR expression or amplification may be a helpful predictor of tumor aggressiveness, invasiveness and of metastatic potential for a cost-effective treatment of cervical nodes in order to improve management. **METHODS:** 140 specimens of LSCC were examined for EGFR content using a radioreceptorial method. 140 untreated consecutive patients with primary LSCC undergoing initial surgical resection were followed up for a median of 49 months (range 2-84 months) after surgery. **RESULTS:** Cox univariate regression analysis using EGFR as continuous variable showed that EGFR levels were directly associated with the risk of lymph node metastasis ($p=0.002$). A significant relationship between EGFR status and cervical node metastasis was observed. The cut off of 20 fM/mg prot was the best prognostic discriminator. Five-year Metastasis Free Survival was 66% for patients with EGFR- tumors as compared to 15% for patients with EGFR+ tumors ($p=0.0005$). On multivariate analysis, EGFR status proved to be a significant independent prognostic factor for MFS ($p=0.001$). **CONCLUSION:** This study suggests that the assessment of EGFR status at the time of diagnosis may allow the identification of a subset of LSCC patients highly susceptible to neck node metastases and permit therapy to be modified accordingly. More particularly, in EGFR negative LSCC patients with clinically N0, observation may be considered an available effective option for cancer control as well as for salvageability or recurrent neck diseases and for quality of life improvement.

ADDED VALUE OF Tc99m SestaMIBI SPECT IN PRIMARY AND SECONDARY STAGING OF HEAD AND NECK TUMORS.

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INTRODUCTION. This study prospectively evaluate the clinical usefulness of Tc99 SestaMIBI SPECT in the detection of primary tumors, lymph node involvement and recurrences in patients with head and neck cancer. **MATERIAL AND METHODS.** 22 patients (age range 40-75, 21 males, 1 female) with head and neck tumors underwent Tc99m SestaMIBI scintigraphy and CT. The sites of primary lesions were as follows: orale cavity ($n=5$), nasopharynx ($n=1$), oropharynx ($n=4$), hypopharynx ($n=3$), larynx ($n=9$). Scintigraphy procedure required: injection of 740 MBq of Tc99m SestaMIBI, dynamic acquisition during the injection, planar scintigraphy at 5 minutes and 2-3 hours post-injection (in order to evaluate tracer washout), SPECT scintigraphy at 15 minutes post-injection evaluation of the images to detect the primary tumor and locoregional or distant metastases. **RESULTS.** The primary tumor was detected by scintigraphy in 19/20 patients. The undetected one was a T1 tumor of oral cavity. Concordance between scintigraphy and CT in detecting neck node metastases was achieved in all patients except one with a CT false negative result and two with CT false positive lesions. Scintigraphy correctly detected local recurrence after Radio-chemotherapy in 2 patients examined (CT was negative in one). **CONCLUSIONS.** Tc99 SestaMIBI Spect appears to be a useful diagnostic modality for the diagnosis and primary and secondary staging of head and

neck cancer. It is able to detect primary tumor and to differentiate metastatic from reactive lymph node in the neck. Furthermore this method also may identify occult primary lesions and residual or recurrent disease after surgery or Radiochemotherapy. Finally on the basis of whole-body scanning it also could be useful in screening of distant metastases. Moreover recent data suggest that the washout of SestaMIBI from the neoplastic lesions is related to multi-drug-resistance proteins, thus our approach should be useful to predict radiochemotherapy responsiveness in the single patient.

NEOADJUVANT CHEMOTHERAPY FOR LOCALLY ADVANCED HEAD AND NECK SQUAMOUS CELL CARCINOMA (LAHNSCC) WITH CARBOPLATIN AND 5-FLUOROURACIL IN CONTINUOUS INFUSION.

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25 previously untreated patients (18 male, 7 female), with biopsy-proven LAHNSCC, stage III (6/25) and IV (19/25), were enrolled from October 1995 through September 1998 to evaluate feasibility, toxicity and response rate.

They received 3 courses of cPF-regimen (CBDCA 300 mg/m² e.v. day 1 and 5-Fluorouracil 1000 mg/m² per day for a 120-hour continuous intravenous infusion, every 28 days). After 3 cycles Radiotherapy and/or Surgery was planned. Patients features were: median age 59 (44-74); PS (ECOG) = 0-2; primary sites = oral cavity: 16 (tongue: 8), oropharynx (tonsil): 6, sinuses: 1, larynx: 2. We totally performed 75 courses of chemotherapy.

Toxicity was generally mild and primarily haematologic: 62% of patients had myelosuppression WHO-grade 1 (generally anemia WHO-grade 1), 10,7% had WHO-grade 2-3 and 10% had WHO-grade 4; 10,7% of patients had thrombocytopenia WHO-grade 4; 10,7% of patients had mucositis WHO-grade 1 and 3; 10,7% of patients had diarrhea WHO-grade 2; 15,7% of patients had nausea/emesis WHO-grade 3. In particular, neutropenia grade 3-4, and thrombocytopenia grade 3-4, were the major causes for postponing treatment by 1 week or to supply with G-CSF. All 25 pts were evaluable for response. 7/25 (28%) patients achieved complete response (CR), 11/25 (44%) patients had partial response (PR), for an objective response rate of 18/25 (72%); 3/25 (12%) patients had stable disease (SD), and 4/25 (16%) patients decreased in progression (PD).

This study points out that cPF-setting is well-tolerated, having good results of low toxicity and controllable levels of myelosuppression; because of a good rate of OR, this regimen can be considered as a good profile in the treatment of LAHNSCC. OS and DFS will be investigated in the progression of this study, near new approaches as AUC-system for Carboplatin dosage.

REFERENCES:

- V. Grogioire et al, *A Phase I-II Trial of Induction Chemotherapy With Carboplatin and Fluorouracil in Locally Advanced Head and Neck Squamous Cella Carcinoma: A Report From the UCL-Oncology Group, Belgium*, J Clin Oncol 9: 1385-1392, 1991.
- De Andres et al, *Randomized Trial Of Neoadjuvant Cisplatin and Fluorouracil Versus Carboplatin And Fluorouracil on patients With Stage IV-M0 Head and Neck Cancer*, J Clin Oncol 13: 1493-1500, 1995.

PACLITAXEL-CARBOPLATIN BASED CHEMOTHERAPY IN ADVANCED HEAD NECK SQUAMOUS CELL CARCINOMA: PRELIMINARY RESULTS

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We had analyzed the treatment response, toxicity and organ preservation of Paclitaxel plus Carboplatin-based regimen (TcP). We present a retrospective study with 9 patients treated with induction chemotherapy. These drugs have both shown good radiosensitization through different mechanism, namely blocking the cell cycle in the G2/M phase and in inhibiting DNA repair. 9 patients affected by biopsy proven head-neck squamous cell carcinoma (all males), stage III (1/9), IV-A (2/9), IV-B (5/9), IV-C (1/9), were enrolled to evaluate feasibility, toxicity, and response rate from May 1998 to September 1998. They underwent administration of 3 courses of TcP-regimen (Paclitaxel 230 mg/mq e.v. on day 1 and CDBCA AUC = 7,5 e.v. on day 1, every 28 days). After 3 cycles Radiotherapy and/or Surgery was planned. Patients features were: median age 58,2 (range 43-71); Performance Status (ECOG) = 0-2; primary sites = oral cavity : 6 (tongue : 1), oropharynx (tonsil) : 1, larynx : 2. One of larynx-affected patients was locally and distant (liver) recurrent. One larynx-affected patient had acute toxic reaction to paclitaxel and stopped the treatment. None of them had received previously chemotherapy treatment. Toxicity was generally on platelet count and alopecia: 2 patients had neutropenia WHO-grade 1, 1 patients had grade 2 and another 1 had grade 3; 2 patients had decrease of platelet count WHO-grade 1, 2 patients had grade 2 and 1 had grade 4; 2 patients had nausea/emesis WHO-grade 1 and patient had grade 2; 1 patient had alopecia WHO-grade 1 and 3 patients had grade 2; 2 patients had neuropathy WHO-grade 1 and 1 had grade 1. 8 patients completed the treatment and were evaluable for response. We achieved 6 (75%) Partial Response, and 2 (25%) Stable Disease. Although we had analyzed few patients, TcP-schedule of patients with locally and metastatic head-neck squamous cell carcinoma with TcP-schedule is feasible; we obtained low profile of toxicity and response rate is encouraging.

REFERENCES:

- F. Dunphy et al, *Paclitaxel and Carboplatin in Head and Neck Cancer*, Semin Oncol 24 (Suppl 19): S 19-25-S19-27; 1997.
- G. Fountzilias et al, *Paclitaxel in Combination With Carboplatin or Gemcitabine for the Treatment of Advanced Head and Neck Cancer*, Semin Oncol 24 (Suppl 19): S 19-28-S19-32; 1997.

Immuno-histological diagnosis in radio-induced pharyngeal and laryngeal cancers. A five clinical cases report.

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Radiation-induced pharyngeal and/or laryngeal cancer is an unusual pathology. Its diagnosis and management are often difficult since it occurs in irradiated territory. In our case, immuno-histological techniques have been necessary for the final diagnosis. The author brings a 5 cases experience of

radiation-induced cancers in pharyngeal or laryngeal territory, developed during the past 15 years. Patients presented a primitive lesion at the mean age of 50 years (± 12.9) and the second malignancies at the mean age of 59 years (± 13.1). The mean latent period noticed between the time of curative radiation and the clinical appearance of the tumour was 9 years (± 3.7). Pre radiotherapy gamma-radiography analysis revealed that at least four patients developed the radiogenic tumour in the limit end of the irradiation fields. Those areas are characterised by a lower irradiation dose level, defined by a 80 to 20% rate of the prescribed dosimetry (corresponding at 14 to 56 Grays in that inventory). For the first time, it is suggested that such radiation darkness areas would be associated with an increased risk for radiation induced cancer occurrence. This assumption tends to confirm that the radiogenic excess risk especially exists below 40 Grays. Histological diagnosis was performed by immunological stainings to differentiate epitheloid from sarcomatoid tissue (and its antigenic characteristics). Its mechanisms of development and the histological characteristics are discussed. Recently published researches (mathematical models and molecular biology) stand for better understanding of this pathological entity.

SUBTOTAL RECONSTRUCTIVE LARYNGECTOMY IN THE TREATMENT OF GLOTTIC CARCINOMA: OUR EXPERIENCE

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Introduction: Authors present their experience concerning oncological and functional results in the treatment of glottic cancer with subtotal reconstructive laryngectomies.

Materials and methods: This surgical treatment was performed on 93 patients between January 1985 and september 1998. Cricohyoidopexy (CHP) was carried out on 48 patients, and cricohyoidoepiglottopexy (CHEP) on 45 of these.

Results: Patients were divided into two groups: the first group includes patients operated between January 1985 and September 1995, and thus with a follow-up period greater than three years; the second group includes patients operated after September 1995 with a follow-up period less than three years: the statistical evaluation of this second group was carried out using an actuarial method according to Kaplan-Meier (1956). As far as the first group was concerned, survival rate was 95.8% with respect to disease-related death, while the overall survival in the second group was 96%. There were 9 recurrences on 78 patients (11.5%); recurrences for T were 7, 3 of which after CHEP (2 of these were occurred in the lower paraglottic space and 1 at peristomal level), and 4 after CHP (3 in the lower paraglottic space and 1 at peristomal level). Decannulation was carried out in 93.3% of CHEP patients (42/45), and in 85.4% of CHP (41/48). Deglutition is excellent in all of patients and only one had difficulty in recovering swallowing function. Moreover, phoniatric control shows a good recovery of vocal function.

Conclusions: Subtotal reconstructive laryngectomies are a most important instrument in the treatment of glottic cancer. The only problem is the lack of correspondence between glottic TNM and percentage of disease's recurrences, especially when the tumor involves anterior commissure (subsite of glottic region): infact this area is undefined and represents actually an object of difference of opinions in U.I.C.C. classification of 1992, too (1).

Bibliography:

1. De Vincentiis M. et Al : Supracricoid laryngectomy with crico-hyoidopexy in the treatment of laryngeal cancer: a functional and oncologic results. Laryngoscope 106: 1108-1114, 1996.

DOES IMMUNOHISTOCHEMICAL STUDY (p53 – Ki67) OF BIOPSY SPECIMENS HAVE A PLACE IN LARYNGEAL SURGERY?

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Introduction

The molecular events which induce and influence laryngeal cell carcinoma are still unknown. However, there are other known factors related to its development (cigarette smoking, alcohol abuse, ionizing radiation, HPV-DNA) which are involved in its prognostic evolution (site, staging, grading, etc...). For the laryngologist, further useful information can be obtained by biomolecular study of histopathologic specimens. From this point of view the Authors report their personal experience with immunohistochemical examination of preoperative biopsy for laryngeal carcinoma and underline how this data can provide an indication for prognostic evaluation and any surgical programming.

Methods

The present study employed immunohistochemical methods (monoclonal antibodies) in 23 patients (only males, aged 47-74 years) with laryngeal cell carcinoma, observed and treated in the ENT Department, University of Chieti. In these patients we performed a retrospective study on preoperative laryngeal biopsy to investigate p53 (oncosuppressor gene) and Ki67 (proliferating cell antigen) expression.

TNM clinical stage was: 9 T2N0Mx, 4 T2N1Mx, 2 T3N1Mx, 4 T3N2Mx, 3 T4N2Mx, 1 T4N3Mx. Surgical treatment consisted of partial laryngectomy in 3 patients, subtotal laryngectomy in 10, total laryngectomy in 6 (tongue base extended in 4 patients) and emipharyngo-total-laryngectomy in 4 patients. Neck dissection (bilateral in 6 patients) was functional in 27 cases and radical in 2. Histopathological grading (G) of the specimens was: 5 G1, 11 G2 and 7 G3. The follow-up showed that 16 patients were alive with non evident disease (NED), 7 had local recurrence (LR) and 4 of them had died. The cut-off for p53 and Ki 67 expression on the biopsy were established as not significant < 10%, significant > 10%. Pathological grading and follow-up were correlated with p53 and Ki 67 expression.

Results

The relationship between histopathological grading and Ki67 with p53 was not significant in any of the G1 patients, 5 out of the 11 G2 patients (45%) Ki67>10%, 9 (82%) p53>10%, 6 out of the 7 G3 patients (86%) Ki67>10% and 4 (57%) p53>10%. The correlation between follow-up and Ki67 with p53 expression was as follows: 6 out of the 7 LR patients (86%) showed Ki67>10%, as did 3 of the 16 NED patients (19%); in contrast p53>10% was found in 5 out of the 7 LR patients (71%) but also in 8 out of the 16 NED patients (50%).

Discussion and Conclusions

In conclusion, the Authors affirm that immunohistochemical examination of biopsy specimens can provide the laryngologist with useful information regarding prognosis and suggestions on treatment of laryngeal cell carcinoma. However, these results need to be confirmed by additional and homogeneous study populations since our experience concerns a limited number of cases of laryngeal cell carcinoma in different stages.

References

- 1) HARRY H., MILLER O.J., KLEIN G. et al.: *Mutant p53-the commonest genetic abnormality in human cancer?* J. Pathol. 162,5-6; 1990.
- 2) MALLOFRE' C., CARDESA A., CAMPO E., CONDOM E., PALACIN A., GARIN-CHIESA P., TRASERRA J.: *Expression of cytokeratins in squamous cell carcinomas of the larynx: immunohistochemical analysis and correlation with prognostic factors.* Path. Res. Pract., 189, 275-282, 1993.

Effect of bilio-intestinal bypass for morbid obesity in patients affected by obstructive sleep apnea syndrome (OSAS)

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Background. Morbid obesity is rising in Western countries and often related to chronic diseases, increased mortality, snoring and obstructive sleep apnea syndrome (OSAS). In massive obesity there is a high incidence of hyperlipaemia, glucose intolerance, systemic and pulmonary hypertension and left ventricular hypertrophy that can increase cardiovascular risk. The apnoeic events that occur in OSAS produce aberrations of gas exchange and decrease of the mean oxygen saturation during sleep. These abnormalities predispose to conditions such as excessive daytime sleepiness, cognitive and vigilance impairment. The purpose of this study was to examine the effects of weight reduction surgery on OSAS in patients with massive obesity.

Patients and methods. A population of 240 patients (142 males and 98 females) referring habitual snoring was submitted to an anthropometric analysis, HLA antigens studies, dynamic videoendoscopy associated to Müller maneuver, rhinomanometry, spirometry, lung function tests, arterial gasometry, whole-night polysomnography and statistical analysis of the data. A body mass index > 40 was found in six patients, 4 females and 2 males, that underwent weight reduction surgery (bilio-intestinal bypass). Polysomnography was repeated 6 and 12 months after the weight reduction treatment.

Results. A significant correlation was found between the severity of OSAS (respiratory disturbance index-RDI) and BMI ($p<0.01$), the neck circumference ($p<0.01$) and the distance from the mandibular plane to the hyoid bone ($p<0.05$). In patients submitted to bilio-intestinal bypass the BMI changed respectively from a mean of 59.7 ± 8.83 to 39.3 ± 2.1 ($p<0.01$) and the RDI from a mean of 64 ± 21 to 24 ± 12 ($p<0.01$).

Conclusion. The weight loss, obtained by bilio-intestinal by-pass, reduces the pharyngeal collapsibility, the number of apneas, hypopneas and desaturation events and increases the mean oxygen saturation during sleep. A substantial weight reduction should be the first step in the treatment, including C-PAP, oral devices, nasal and pharyngeal surgery, of obese patients affected by OSAS.

Additional predictor marker of the presence of occult lymph node metastases in head and neck cancer

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Introduction. The cervical lymph node status is an important factor in determining the prognosis of patients with head and neck cancer. It has been estimated that the 5 year overall survival is reduced by approximately 50% in patients with cervical lymph node metastases with respect to patients without metastases. The treatment of occult lymph node metastases is crucial to the effective management of head and neck cancer. There is a great debate between those who prefer perform functional neck dissection due to the great incidence of occult metastases and better oncological results and those who are in favour of a "wait and see" policy because of the increase of surgical risks, the great number of "unuseful" neck dissections and the propension to the spread of residual tumor cells. Modern imaging techniques for assessment of these nodal metastases are deficient because they lack the resolution and contrast to descript micrometastases inside lymph nodes. This consideration prompted us to identify new modalities for addressing this important clinical issue.

Methods. We therefore immunohistochemically investigated, ABC method, the expression of p53 and cyclin D1 protein in 32 head and neck cancer with clinically and radiologically false negative lymph nodes (pN+). A group of 64 patients with head and neck cancer with histologically negative laterocervical lymph nodes (pN0) was used as control.

Results. We did not find any correlation between p53 overexpression and the presence of occult metastases ($p=0.8288$). Cyclin D1 protein was overexpressed in 43.77% of the samples analyzed and was significantly associated with tumor extension ($p=0.002$) advanced clinical stage ($p=0.001$). At univariate regression analysis cyclin D1 overexpression significantly correlated with the presence of occult lymph node metastases ($p=0.007$) and it remain an independent predictor factor at multivariate analysis ($p=0.0055$).

Discussion and conclusion. This data underline the importance of the immunohistochemical analysis of cyclin D1 overexpression in the identification of subgroups of patients with clinical negative lymph nodes who are at considerable risk of occult metastases. Therefore the immunohistochemical assessment of cyclin D1 overexpression in diagnostic biptic samples may help the surgeon to select those patients who may benefit from a functional neck dissection. In conclusion cyclin D1 may be a new marker used as an adjunctive tool in carrying out the more appropriate therapeutical strategy.

SUB-TOTAL RECONSTRUCTIVE LARYNGECTOMIES: OUR EXPERIENCE

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Sub-total reconstructive laryngectomies consist in the removal of the supra-cricoid portion of the larynx with or without preservation of one(A) or both arytenoid cartilages (AA). Airway continuity is obtained by means of a crico-hyoido-pexis (CHP) or of a crico-hyoido-epiglottopexis (CHEP). Usually CHEP(+AA/A) is indicated in patients with limited T1b and glottic tumors, while CHP(+A) is performed in case of extended T2,T3 and selected T4 glotto-supra-glottic tumors. The Authors present their experience on oncological and functional results of sub-total reconstructive laryngectomies performed from the same surgeon on 33 subjects up to 1985 and 1996. CHP was carried out on 17 patients (15 males and 2 female) ranging in age from 54 to 75 years (mean age 64.3); CHEP was carried out on 16 patients (14 males and 2 female) ranging in age from 47 to 76 years (mean age 60.9).

Tumors staging (UICC or AJC classification) for CHP patients were 2 T1a, 2 T1b, 12 T2, 1 T3; 14 patients underwent to an omolateral Functional Lateral Neck Dissection (FLND), in 3 patients to a bilateral FLND. Tumors staging for CHEP were 3 T1a, 9 T1b, 3 T2, 1 T4; an omolateral FLND was performed in 4 patients. The statistical evaluation was evaluated using the actuarial method according to Kaplan-Meier. In the group of CHEP the naso-gastric tube was kept in position for an average days of 16, while decannulation was carried out in 93.7% (15/16). In CHP patients the naso-gastric tube was kept in position for an average days of 21 (range 7-30), while decannulation was carried out in 94.1% (16/17). Post operative Radiotherapy was carried out in 3 CHP patients and in 1 CHEP patient. Survival rate after 3 years was 65% (8/12) for CHP (2 recurrences, 2 death for others disease), and 92% (12/16) for CHEP. There were 2 recurrences (12.5%) after CHP and 1 recurrence after CHEP (after 8 years). Sub-total reconstructive laryngectomy could be considered the extreme development of functional surgery in laryngeal tumors and thanks to both oncological and functional results these surgical procedures are increasingly widespread reducing the number of subjects treated with total laryngectomy.

POST-OPERATIVE EARLY REHABILITATION AS INTEGRATED TREATMENT FOR LARYNGEAL CARCINOMAS.

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Background. In order to avoid total laryngectomies, a lot of partial and subtotal surgical procedures have been described. Supracricoid Partial Laryngectomies (SPL) represent valid surgical procedures that allow either a good oncologic and functional outcome. After surgery the recovery of a normal swallow and the removal of tracheostomy tube can require a variable period of time.

The aim of this study was to compare the lenght of the time necessary for a functional recovery in order to verify the usefulness of post-operative early and intensive rehabilitation.

Methods. A whole of 182 patients subjected to SPL between January 1984 and December 1998 is divided into two groups. The former group consisting into 107 patients hadn't received a postoperative rehabilitation. The latter group made up by 75 patients received an intensive early post-operative rehabilitation. In the first group Cricohyoidopexy (CHP) was carried out on 69 patients (average age : 58.3 y) and Cricohyoidoepiglottopexy (CHEP) on 38 patients (average age : 59.2y). In the second group CHP was performed on 63 cases (average age : 61.3y) and CHEP on 12 cases (average age : 56.3y).

Results. Among the 107 cases belonging to the former group the CHP series have reached an adequate recovery of swallowing in 62 patients (89.8%) after a mean time of 46.6 days. Among the 7 cases with persistent dysphagia 4 patients are still cannulated, 1 has died because of "ab ingestis" pneumonia and 2 have been subjected to total laryngectomy. In the CHEP series a normal deglutition was achieved in all the cases after a mean time of 33.1 days. In the latter group 61 cases (96.8%) of the CHP series have resolved their postoperative dysphagia in an average time of 31.5 days. Two patients are still cannulated. Finally the 12 cases of the CHEP series required an average time of 23.2 days for restoration of a normal swallow.

Conclusions. The analysis of results confirms that the functional recovery after SPL is much faster if the surgical treatment is integrated with an intensive early rehabilitation.

Pediatric Surgery

Vaginal – urethroplasty for the correction of “high” urogenital sinus

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INTRODUCTION

The urogenital sinus (UGS) is due to the persistence of a common channel for both genital and urinary system, completely separated from the ano – rectal canal.

The UGS is a definitive and normal anatomical situation in male, whereas in female it is only a transitory stage in the genital system development.

Usually this anomaly is associated with congenital adrogenital syndrome and virilization of external genitalia, rarely external genitalia are normal.

As suggested by Williams and Bloomberg it is usually classified according the level of confluence of vagina and urethra.

When the vaginal and urethral confluence is below the vesical sphincter the UGS is defined as a low form. The low UGS is treated with a simple vaginoplasty performed trough the perineum with a “U” shaped skin flap. The correction of “high” UGS, with the vaginal and urethral confluence above the sphincter, is more controversial.

The aim of this work is to present our experience in the surgical treatment via anterior sagittal transanorectal approach (ASTRA) of the “high” UGS with hydrometrocolpos.

METHODS

At the institute of Paediatric Surgery of the University of Messina between 1995 and 1998 were managed three cases of UGS without ambiguous genitalia and urinary hydrometrocolpos in which prenatal sonography had shown a cystic dilatation of the pelvis. Two patients were temporally treated with intermittent vaginal catheterization, one patients had cistostomy. At the age of 6 – 8 months, after colostomy, a vaginoplasty and an urethroplasty were performed via anterior sagittal transanorectal approach as described by Domini.

RESULTS

Patients were followed up for a period ranging from 14 months to 4 years (mean 22 months).

The aesthetic results were always good with the “neo” vaginal opening beneath the external urethral meatus. The urethra was easily catheterizable with no strictures and so the anal canal. No dilatations were necessary. After colostomy closure all patients were continent for stool and urine.

CONCLUSION

The posterior sagittal transanorectal approach proposed by Pena for the treatment of the ARM and modified by Domini represent a good surgical options in the treatment of the “high” UGS, with optimal mobilisation of the vagina and preservation of the anorectal innervation and of the sphincteric mechanism.

ISOLATED TORSION OF THE FALLOPIAN TUBE IN PREMENARCHEAL GIRL: CASE REPORT AND REVIEW OF THE LITERATURE.

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Isolated Torsion of the Fallopian tube (ITT) in premenarcheal period is a rare condition. Only about 20 cases have been reported in the last 65 years. ITT is virtually never diagnosed preoperatively, because of the lack of definitive diagnostic signs and US findings; its similarity to other acute abdominal disease processes, and left-sided involvement results in a

significant delay in diagnosis. Color Doppler US can show interrupted but also nearly normal arterial flow.

A 11-year-old girl was admitted with a 5-day history of intermittent abdominal pain without fever, nausea or vomiting. She had normal bowel movements, the abdomen was not distended. The abdominal radiograph showed air-fluid levels. At the time of the operation, the left Fallopian tube was torsed and hemorrhagic with three twists at the medial end. After detorsion and irrigation the tube apparently regained good blood supply but a left salpingectomy with preservation of the ovary was performed: the histologic findings of partial infarction confirmed the correct procedure. There was no evidence of cyst, tumors or primary vasculitis.

At our knowledge, the ITT can be reduced and successfully preserved only before infarction occurs and after a well recognized-pathology healing. In premenarcheal girls, pelvic congestion induced by constipation, disturbed venous blood flow from the adnexa, abnormal long mesosalpinx and mesovarium are the main idiopathic risk factors. In our case, a prophylactic triPLICATION of the ligament or an oophorectomy was not necessary, but this procedures are recommended to prevent recurrent torsion. In conclusion, the salvage of adnexa after torsion is still poor in the pediatric age group in spite of constant progress in imaging possibilities and videosurgery. We advocate the use of endorectal and color Doppler US and a laparoscopic approach in young girls presenting emergently with sharp, colicky and of sudden onset pain, because early surgery provides the only possibility of salvage of the affected tube.

In the years to come more work must be done to assess the vitality of the adnexa, so that as many girls as possible can benefit from conservative treatment.

CONSERVATIVE SURGICAL APPROACH TO SIGMOID COLON DUPLICATION

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Introduction: sigmoid colon duplication is a rare congenital anomaly that may present with pelvic compression of the terminal alimentary canal and lower urinary tract (ureters and bladder). The ultrasonography, as first step investigation, allows a generic diagnosis of pelvic mass whereas a certain diagnosis is usually intraoperative.

Materials and Methods: A 7-year-old girl was admitted for abdominal pain, vomiting, fever (38° C). A palpable mass was evidenced in lower abdomen. An ultrasonography showed an anechoic septated structure (Ø 7cm x 7cm) indistinguishable from the bladder’s left lateral wall. At laparotomy, undertaken for the presumptive diagnosis of torsion of an ovarian cyst, a cystic neoformation conjoined to left sigmoid colon wall was found. It was possible to perform a complete excision of the mass, without opening its wall, with preservation of adjacent bowel and its vascularization. Histological report confirmed the intra-operative diagnosis of bowel duplication.

Results: The post-operative period was uneventful. Oral feeding was begun on day 2 and the patient had a normal bowel movements after 2 days. The girl is healthy after 6 months follow-up.

Conclusion: This kind of operative solution, when possible, proved to be an easy and safe operation eliminating the risks of complications due to a colonic resection without preoperative preparation.

References: 1. Long L, Zhang JZ, Chen JJ, Wang XY. “Conservation approach to duplication of the small bowel”. *J.Pediatr. Surg.*, 32:1679-82, 1997.

Surgical Treatment of incomplete penoscrotal transposition associated with bifid scrotum and perineal hypospadias

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Incomplete penoscrotal transposition associated with bifid scrotum and perineal hypospadias is an uncommon anomaly of the external genitalia. Surgical correction of this complex anomaly can be achieved in one stage using for the urethral reconstruction vascularized preputial flaps, bladder or buccal mucosa free grafts. A two stages procedure is also possible. The first step should: a) Correct the bifid scrotum; b) achieve a normal position of the penis in relation with the scrotum; c) obtain a penis with enough length and normal erection; d) perform an urethroplasty of the scrotal segment using the urethral plate remnants present between the two halves of the bifid scrotum. The second step should be direct to reconstruct the urethra using the urethral plate (Duplay technique), to perform the glanuloplasty and reconstruct the prepuce.

Methods. During the last 7 years eight neonates were observed and treated at our Institution for incomplete peno-scrotal transposition with bifid scrotum and perineal hypospadias. All the patients were males (XY). Before surgical treatment at 6-12 months, they were treated locally for 4 weeks with dehydrotestosterone gel (Andractin gel) to elongate the shaft. In all cases the urethra was reconstructed using the Glenn Anderson technique modified with the Duplay technique, for the reconstruction of the scrotal urethra, thus transforming the hypospadias in a penoscrotal type. The next step was carried out after 6-12 months after a second local treatment with testosterone gel. The final reconstruction of the urethra was achieved using the urethral plate according to the Duplay technique. In three cases the mobilisation of the urethral plate was necessary to remove the residual chordee. After this the glans and prepuce were reconstructed. In all patients a suprapubic cystostomy has been necessary and kept for 10-12 days.

Results. The aesthetic results have been always good after the first step. Penis appeared located in its normal position, normal erection were possible, the scrotum was regular and the hypospadias transformed from perineal to penoscrotal. After the surgical step the meatus was at the tip of the glans with conical shape and always partially covered by the prepuce. A meatal stenosis was recorded in two cases, in one case a meatotomy was necessary to solve the stenosis. A fistula was observed in two cases and closed. In all patients a good functional results was achieved.

Discussion and conclusion. For the correction of vulviform hypospadias associated with penoscrotal transposition different techniques have been proposed, with the aim to repair the malformation in one or two steps. In the one stage technique skin or mucous flaps have been proposed. The results reported are controversial. Usually the length of pedunculated preputial flap does not reach the penoscrotal edge; the quality of the preputial lamina is not as good as the urethral plate; with the preputial or mucous flap a posterior anastomosis of the urethra is necessary and this can be responsible for the morphology of the urethra almost always appear tortuous. The two stages technique correct the penoscrotal transposition in the first step and the neo-urethra is reconstructed in the second step with the Duplay technique after a wide dissection, not always necessary, of the urethral plate to remove the chordee. This technique grants a good urethral reconstruction avoiding the necessity of a proximal anastomosis responsible for possible stenosis. Another advantage of the two stages technique is the possibility to create a conical glans covered by prepuce, a non rotated penis and a low incidence of fistulae.

LAPAROSCOPIC TREATMENT OF RECURRENT INGUINAL HERNIA IN CHILDREN

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The authors report their experience in laparoscopic treatment of recurrent inguinal hernia in children.

Between November 1996 and October 1998 we have treated laparoscopically eight boys that had an inguinal hernia recurrent to conventional surgery; all these 8 children except one were operated the first time in another Institution.

This simple technique requires 3 trocars: a 0°-5mm telescope inserted through the umbilicus and two 3-mm trocars placed 3 - 4 cm below the umbilicus at the level of the left and right side. In all 8 cases we found a pervious vaginal peritoneal duct (6 times on right side, 2 times on the left).

Our approach is to open the external hemicircumference of the neck in order to bring the conjoined tendon closer to the crural arch with a non-resorbable 4/0 suture, and then to place a purse-string suture of 3/0 resorbable suture around the internal orifice of the inguinal canal. There were no intra or post-surgical complications. In all 8 patients there was a total recovery from the hernia.

The advantages deriving from this technique are: in first that in case of hernial recurrences after a traditional inguinal approach, with the laparoscopic technique there is no need for another dissection of the cord with the possible damage of the vas deferens or of the spermatic vessels and in addition it permits to reveal the possible presence of a direct hernia or the opportunity to evaluate the contralateral inguinal side.

Our early results suggest that laparoscopic surgery is a feasible and safe technique for the treatment of recurrent inguinal hernia in children.

THE INVERSION TECHNIQUE : AN EFFECTIVE PROCEDURE TO AVOID INFECTIOUS COMPLICATIONS AFTER APPENDECTOMY IN CHILDREN

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In 20% of patients who undergo appendectomy, the subsequent histological examination indicates either a healthy or moderately inflamed appendix; in case of moderate inflammation, the complication rate reported in the literature is 4%.

In order to avoid an incidental appendectomy (i.e., performed without or with only a modest degree of inflammation) from becoming a source of complications, we have adopted an inversion technique on 22 children who have undergone appendectomy during an intervention for malrotation.

From October 1992 to October 1997, twenty-two patients (13 boys and 9 girls), aged from 1 month to 12 years (mean 3 yrs.) were referred to our Department for intestinal malrotation; these patients all underwent surgical correction of malrotation and associated appendectomy using the inversion technique.

This method consists in the as traditional ligation of the meso-appendix and coagulation of meso appendix along the appendiceal wall but is then followed by the invagination of the appendix inside the cecum after performing a purse-string suture.

At follow-up (max. 6 yrs.) none of the patients have had any complications related to the appendectomy.

These authors believe that the inversion appendectomy – despite its extreme simplicity – is a valid alternative to traditional appendectomy in cases without or with only a modest degree of inflammation.

The great advantage is that by avoiding the resection of the appendix, the risk of infection is completely eliminated.

ADVANTAGES OF PDA LIGATION PERFORMED IN THE NEONATAL INTENSIVE CARE UNIT

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INTRODUCTION: Patent Ductus Arteriosus (PDA) is an extremely common condition in the premature newborn. In most of the cases it is asymptomatic and resolves spontaneously, but it may also give rise to acute heart failure that is refractory to medical therapy and may impair or worsen the patient's respiratory condition. In such patients administration of prostaglandin synthesis inhibitors is mandatory to achieve closure of the ductus, but when this therapy is contraindicated or proves ineffective surgery is the only choice.

Although PDA ligation is in itself a relatively simple procedure, many different complications have been observed following this operation, possibly related to the transfer of the patients to the operating room.

AIM OF THE STUDY: to evaluate if there are any differences in the clinical outcome of patients submitted to ductus ligation in the operating room or within the NICU.

PATIENTS AND METHODS: 34 neonates (19 males, 15 females; gestational age 27.1 ± 2.0 wks [range 25-30]; birth weight 785 ± 216 g [range 520-1330]) underwent PDA ligation during the first month of life. 13 were transferred to the operating room for the procedure, and the other 21 patients underwent the same operation in the infant warmer without moving from the NICU.

Both groups were similar (eg: birth weight, gestational age, left-right shunt) at the time of the operation. The following preoperative parameters were evaluated in each group: 1) respiratory distress syndrome; 2) intraventricular haemorrhage; 3) sepsis. The survival rate, the rate of early (hypothermia, hypotension, pneumothorax, pulmonary haemorrhage, acute renal failure, sepsis, intraventricular haemorrhage, necrotizing enterocolitis, respiratory complications) and late (chronic lung disease, periventricular leucomalacia, retinopathy of prematurity) complications were examined.

RESULTS: the group operated on in the NICU showed an overall improvement of the survival rate, a better thermal, cardiovascular and respiratory homeostasis, and significantly lower rates of hypotension, respiratory complications and chronic pathology such as chronic lung disease and periventricular leucomalacia.

CONCLUSIONS: PDA ligation performed in the NICU is useful in reducing the rate of early and late complications and in improving the survival rate.

REFERENCES:

- In-situ emergency paediatric surgery in the intensive care unit. Fanning NF, Casey W, Corbally MT. *Pediatr Surg Int* (1998) 13: 587-589
- Operative closure of patent ductus arteriosus in the neonatal intensive care unit. Mortier E, Onganae M, Vermassen F, et al (1996). *Acta Chir Belg* 96: 266-268.

LAPAROSCOPIC FUNDOPLICATION IN INFANTS IN THE FIRST YEAR OF LIFE

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In a five years period from 1993 to 1998 we have treated 289 children affected by gastroesophageal reflux using laparoscopic approach; 25 children

(8.6%) in this series were less than one year old and with a body weight less than 10 Kgs.

Six patients were neurologically impaired and one of them has been already operated on for hydrocephalus and had 2 ventriculo peritoneal shunts; moreover 3 patients have been operated on for esophageal atresia. The main indication for surgery were GER-induced aspiration pneumonia (8), a large hiatal hernia (8), or a failure to thrive and absence of response to the medical therapy (9). We have performed in 14 cases a posterior 270° fundoplication according to Toupet technique, in 11 cases a 360° fundoplication according to Nissen or Nissen-Rossetti technique, and only in 3 cases of neurologically impaired children we have realised an associated gastrostomy.

All the intervention were completed successfully in laparoscopy.

Average duration of surgery was 60 minutes. In 4 cases we found very dilated intestinal loops that remarkably complicated the intervention due to the diminution in size of the operative chamber. We recorded one perioperative complication: a pneumothorax, resolved with a simple puncture at the end of intervention. With a maximum follow-up of 4 years: one child was reoperated in laparoscopy due to a recurrence of GER after the first intervention, 3 children had dysphagia for few months after the intervention but it spontaneously disappeared.

Our experience demonstrates that laparoscopic fundoplication, in expert hands, is a feasible and effective technique even for very small babies.

However, an accurate pre-operative evaluation is necessary, above all in neurologically impaired children in order to properly choose the technical procedure to adopt and the need of a feeding gastrostomy.

RADICAL RETROPERITONEAL LYMPHADENECTOMY IN PEDIATRIC ONCOLOGY

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AIM OF THE STUDY: To investigate the role of radical retroperitoneal lymphadenectomy (RRL) in pediatric surgical oncology.

PATIENTS AND METHODS: From November 1996 to November 1998, 9 children with retroperitoneal deposits, secondary to abdominal neuroblastoma (AN) or testicular carcinoma (TCa), 7 and 2 patients respectively, were consecutively admitted to our Unit. Mean age was 7 years and 9 months (range: 2 yrs and 1 mos - 18 yrs and 2 mos). 6 out of 7 patients with AN presented with advanced disease and underwent surgery after chemotherapy. Delayed primary tumor excision combined with RRL were performed in all patients. The remainder patient was elected for staging biopsy, but at operation complete primary tumor excision and RRL were judged feasible and carried out. 2 patients with TCa had primary tumor excision followed by chemotherapy and delayed RRL.

RESULTS: Overall survival was 78 % with mean follow-up of 12 months (range: 3 mos - 27 mos). Complete excision was documented in 8 out of 9 patients. Among 7 patients with AN, complete remission was achieved in 1 case, cured by surgery alone. 4 patients presented with progression of disease, one of which received autologous bone marrow transplant for transitory complete remission. 2 patients died for progression of disease and meningitis during partial remission, respectively. Both patients with TCa received post-operative chemotherapy and are currently alive and disease-free.

CONCLUSIONS: RRL is most valuable in selected patients. A control study is required to define the role of this procedure in the treatment of advanced neuroblastoma.

Morpho-functional results after reconstructive surgery for ARM.

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Introduction. The term anorectal malformations (ARM) encompasses different congenital anomalies of the region of different severity. A correct treatment of such anomalies is based on a perfect knowledge of the anatomy of the region. At the beginning of 80's deVries and Peña first proposed a new technique for the surgical correction of these anomalies. They based the new approach on several anatomical studies. Aim of the present paper has been that to carry out a morpho-functional evaluation in patients operated for high or intermediate forms of AIM using the posterior sagittal approach proposed by Peña.

Materials and Methods. Twelve patients, 7 males and 5 females were operated at our Institution in the last 9 years. They were affected by ARM of the high or intermediate type according to Wingspread classification. Patients were reviewed at follow-up between four and six years after operation. Clinical evaluation was carried out using a clinical score (from 0 to 3) recently proposed. The morphological evaluation was achieved using the Magnetic Resonance Imaging (MRI) to study the anatomy of the region and the position of the rectum inside the muscle complex and sphincter, after reconstructive surgery, and to verify the muscles development. Functional evaluation, finally, was carried out using both manometric and videourodynamic studies. **Results.** In five cases an excellent continence was recorded. This was good in other four and fair in three patients. Particularly these last three cases mainly complained of constipation with reported episodes of soiling. MRI study showed in three cases an inadequate muscle development; rectum appeared always perfectly centred inside the muscle complex and external sphincter describing a normal angle degree. Manometry revealed in seven cases a complete recto-anal reflex with normal length. The reflex was absent in three cases and incomplete in two. The videourodynamic evaluation showed a normal exam in 8 patients with good activity of the striated sphincter. In four cases, all females, a bladder instability together with enuresis was evident, this was successfully treated with oxibutinin. **Discussion.** The new posterior sagittal anorectoplasty proposed by deVries and Peña has added to the previous technique a direct view of the rectum and of the fistula; thus avoiding blind dissection and reducing the possibility of damage to the urethra, the seminal vesicles, the deferens and the posterior wall of the vagina. Despite the good results achieved is not possible to affirm that all the problems can be solved with this technique. Different other elements are involved in the mechanism of continence; congenital neurological damage, bone malformations and other anomalies can be associated being responsible for the poor results. **References.** Peña A.: Anorectal malformations. Sem. Pediatr. Surg. 1995, 4:35-47.

ENDOSCOPIC PNEUMATIC REDUCTION OF PEDIATRIC INTUSSUSCEPTION

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Introduction Intussusception (ITS) account for 18% of intestinal occlusions in pediatric age. Gold standard treatment for ITS is enema + pneumatic reduction (E+P) followed by surgery if initial treatment fails. We report on 7 cases of pediatric ITS who did not respond to enema + pneumatic reduction and, then, treated by endoscopic pneumatic reduction (EPR).

Methods Over 9 year-period we observed 7 cases (age range 4 mo-9 mo) of ileo-ceco-colic ITS resistant to E+P. Family history was negative but for 2 pz, parents had chronic bowel inflammatory disease or food allergy. None had clear predisposing disease for ITS. 4 pz presented with past history of recurrent abdominal pain, intermittent intestinal occlusion and frequent enteritis. Symptoms developed 12 - 48 hrs before admission and consisted of abdominal pain, rectal bleeding and vomit. Unsuccessful E+P was attempted in all cases. EPR was performed previous premedication with benzodiazepines and spasmolytic agents. EPR consisted of combined flexo-estensory movements of endoscope associated to air inflation under visual control and manual compression of abdominal wall.

Results 6/7 cases had complete ITS reduction up to the ileo-cecal valve but 1 required addition E+P. All had post-EPR enema to demonstrate ITS reduction. None developed recurrence of ITS. In all cases there were endoscopic signs of non-specific colitis. **Conclusions** We believe that EPR is a safe and effective treatment for resistant ITS especially when diagnosis is made early (within 48 hrs) and ITS is not already complicated by deep ulcers or perforation. Finally, EPR may contribute to better define the etiology of ITS because allowed direct vision and biopsy of colonic mucosa.

References 1) B Lipschitz et al.: J Ped Gastroenterology and Nutrition, 21:91-94, 1995

NEPHRON SPARING SURGERY FOR UNILATERAL WILMS' TUMOR

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AIM OF THE STUDY: To investigate whether nephron sparing surgery (NSS) may be a reasonable option in selected children with Stage I Wilms' tumor and normal contralateral kidney.

PATIENTS AND METHODS: Between 1992 and 1998, 22 children with unilateral kidney tumor were admitted to our Unit. Patients were considered eligible to NSS according to the following criteria: 1) more than 50 % of functioning kidney preservable; 2) stage I disease, confirmed on intra-operative frozen section biopsies; 3) no unfavorable histology on frozen section biopsies from excised tumor. Actinomycin and vincristin were given pre- and post-operatively. Epirubicin or, more recently carboplatin were added when residual microscopic disease was suspected on definitive multiple microscopic sections.

RESULTS: NSS was feasible in six out of seven eligible patients. Table shows main findings:

Pts	Age	Indication	Surgical procedure†	Follow-up‡
1	29 mos	Associated anomalies	Enucleation	84 mos
2	23 mos	Elective	Enucleation	83 mos
3	24 mos	Elective	Enucleation	60 mos
4	13 yrs	Berger's disease	Heminephrectomy	26 mos
5	16 mos	Bilat. hyperplastic nephroblastomatosis	a- R-Enucleation b- L-Enucleation*	24 mos
6	4 yrs	Elective	Wedge resection	16 mos

† without hypothermia or vascular occlusion; * metachronous nephroblastoma; ‡ all patients disease-free with good function of affected kidney following NSS

CONCLUSIONS: Nss is feasible in a good proportion of children with Stage I Wilms' tumor; the recurrence rate is similar to that found in patients with bilateral nephroblastoma or unilateral/bilateral renal cell carcinoma, but a longer follow-up is needed to evaluate whether the risk of nephrectomy may outweigh the risk of longer chemotherapy in children with suspected residual microscopic disease.

Clitoridoplastes in infants with adrenogenital syndrome

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Congenital virilizing hyperplasia of adrenal glands is the most common cause of ambiguous genitalia in female. Its incidence around 1/65.000 live births. The surgical correction of the anomalies of the external genitalia in these patients is mainly centred on the reduction of the hypertrophied clitoris in order to achieve an anormal shape and dimension both fundamental for normal function, a good aesthetic appearance and a normal psychological behaviour. Clitoridoplasty with burying and reimplantation of the corpora cavernosa first proposed by Pellerin has been considered the technique that preserved during reconstruction the glands and its function. Nowadays most of the surgeons use another technique of partial resection of corpora cavernosa according to Mollard.

With this technique the hypertrophic segment is removed leaving the roots of the corpora and the glands so to reconstruct a normal anatomy.

Aim of the present paper has been that to report our experience with the clitoridoplastics according to Pellerin and Mollard.

Patients and methods

Between 1972 and 1998 15 infants girls have been observed and treated at our Institution with congenital hyperplasia of the adrenal glands.

The clitoridoplasty has been performed at six months of age in the nine cases observed the newborn period. In two cases, observed later the operation has been performed at the age of two and the age of five. During the period 1972 to 1980 the four patients with female pseudohermaphroditism were treated with Pellerin technique. The other cases, more recently, were treated with the Mollard technique.

Results

No major complication were observed in the early post-operative period. In the patients treated with the Pellerin technique, after 10 year follow up, the aesthetic results have been good in three cases and fair in one due to persistent of a voluminous glands. In two patients already in the puberty age the erection have never been painful.

In the cases treated with the Mollard technique the aesthetic results must be considered very good as well as the functional results.

Conclusion

Most of the patients with congenital hyperplasia of adrenal glands need surgical correction of the hypertrophic clitoris, since the hormonal treatment do not achieve enough reduction in the size of the clitoris. Surgical reduction and plasty of the hypertrophied clitoris must be considered as the gold standard. Pellerin technique in the most recent years has been abandoned for the not always acceptable aesthetic and functional results. In presence of very hypertrophied corpora cavernosa, in fact, this technique could be responsible for painful erections.

The Mollard technique on the other hand gives very good aesthetic results with normal erection of corpora cavernosa.

We believe that the surgical correction of hypertrophied clitoris should be undertaken within the sixth month of life trying to reconstruct a normal anatomy of the external genitalia before the little girls could have psychological problems related to the diversity of their anatomy.

ANTERIOR SAGITTAL TRANSANORECTAL APPROACH (ASTRA) IN THE TREATMENT OF CONGENITAL AND ACQUIRED DISORDERS OF THE POSTERIOR URETHRA: PERSONAL EXPERIENCE

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Aims: Surgical access to the posterior urethra is often difficult and several surgical solutions have been proposed. Disorders in this area are considered too high to be approached through the perineum or too low to be approached through the abdomen. We suggest an anterior sagittal transanorectal approach based on splitting the anterior rectal wall only. This alternative technique provides excellent exposure to the retrourethral region, permitting simple and safe surgery.

Methods: From March 1993 to June 1998 the ASTRA was performed for the treatment of complex disorders of genitourinary tract in 24 children: 15 females, of whom 14 with adrenogenital syndrome and 1 case of posttraumatic urethro-vaginal fistula; 4 males, of whom 1 with penile agenesis, 2 with urethral duplication and 1 with a prostatic rhabdomyosarcoma; 5 patients with intersex disorders, of whom 4 with mixed gonadal dysgenesis, and 1 with male dysgenetic pseudohermaphroditism. At the time of surgery the age range was from 6 months to 15 years (mean, 5.2 years). With the patient in a knee-chest position, a midline sagittal incision is made from anus onto the perineum. The incision deepened through the perineal body and the anterior rectal wall is divided, providing an extensive exposure of the pelvic region. After the correction of the different conditions, the anterior rectal wall is reconstructed with the perineal body. A protective colostomy is usually performed, which will be closed 1 month after the main repair. In the last three cases the ASTRA was performed without colostomy. Anorectal manometry and urodynamic evaluation were performed 6 months postoperatively.

Results: At a follow-up ranging from 3 mos. to 5 yrs, all patients were completely continent of stool and urine.

Conclusion: The ASTRA provides an excellent exposure and an exact visualization of all structures, which make surgery safer. After a preliminary experience, we believe that it is possible to perform this procedure successfully without a colostomy. This approach should be considered as a useful alternative for the treatment of various congenital and acquired pelvic disorders.

Plastic Surgery

The posterior interosseous flap: outcomes in 10 cases.

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The authors present some clinical applications of the posterior interosseous flap in treatment of complex injuries of the hand.

Following the study of 40 anatomical dissections of the forearm, the flap is explained.

The posterior interosseous flap is a septo-cutaneous island flap, vascularized by the posterior interosseous artery. This artery arises from the common interosseous artery, running dorsally on the interosseous membrane, between muscle extensor carpi ulnaris and muscle extensor digiti minimi, to reach the wrist. The artery gives several branches to vascularise the dorsal and lateral region of the forearm until the wrist, where it joins with the anterior interosseous artery and the carpal vascular arcade.

The flap is prepared on the posterior forearm, the artery is then isolated along the septum that separates the E.C.U. and E.D.M. muscles until the point of the anastomotic carrefour, that constitutes the "pivot" point of rotation for the island flap.

The reversed flap, pedicled distally, is then used to cover loss of tissue on the hand.

Surgery techniques and reverse flap physiological aspects are discussed. Outcomes in 10 cases are shown.

LOCAL AND LOCOREGIONAL FLAPS IN NASAL TIP RECONSTRUCTION: PERSONAL EXPERIENCE

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INTRODUCTION

The nasal tip is frequently involved, alone or in combination with adjacent subunits, by malignant skin neoplasms. The Authors evaluate indication and limits of some common reconstructive procedures described for surface defects in this region.

METHODS

More than eight hundred basal cell carcinomas of the nose have been treated at the Plastic Surgery Department of the Istituto Dermopatico dell'Immacolata of Roma between January 1996 and January 1999. Aesthetic outcomes have been evaluated 3 and 12 months postoperatively.

RESULTS

Local, intranasal, skin flaps always offer the best color and texture matching, locoregional flaps are our first choice for larger lesions involving two or more subunits of the nose, frontal flaps achieving the best cosmetic results. Nasolabial flaps represent a good choice for the novice surgeon but often create unpleasant aesthetic results at the donor area.

DISCUSSION AND CONCLUSIONS

An accurate knowledge of the different reconstructive procedures described and of the modern concepts of subunits of the nose is mandatory to obtain better cosmetic outcomes.

In our experience best results have often been obtained by the use of bilobed local flaps and frontal paramedian axial flaps.

REFERENCES

- Ian T. Jackson. Local flaps in head and neck reconstruction. C.U. Mosby Company . 1985
 Frederick J Menick. Facial reconstruction in regional units. Perspectives in Plastic Surgery 1994(8)1:104-36

TISSUE ENGINEERING IN EXPERIMENTAL PREFABRICATED FLAPS SURGERY

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INTRODUCTION

Bone defect repair has always been a problem of difficult resolution. Autografts and allografts have been used, but results in a high complication rate of infection, extrusion and reabsorption under several conditions.

The use of vascularized bone flaps (iliac crest, fibula, scapula, rib, etc.) has reduced the frequency of these drawbacks. However, the problems of availability of donor tissue, donor site morbidity, inability to shape the graft to the exact configuration of the defect and furthermore complexity of surgery, has not yet been solved.

In light of the recently described experimental technique of "in vivo" bone reconstitution with biotechnological methods (from bone marrow stromal cells) and the prefabrication flap procedures, we postulated the possibility to obtain autologous bone growth in a myocutaneous flap, thus creating a composite osteomyocutaneous preformed flap.

MATERIAL AND METHODS

Human bone marrow stromal cells obtained from healthy donors were delivered into the latissimus dorsi of groups of 12 athymic mice by porous

hydroxiapatite absorbable ceramic model. The samples were cut in cubes of approximately 64 mm³. In each animal 2 implants (1 loaded with cells and 1 control ceramic alone) were inserted. Animals were sacrificed 8 weeks after implantation, and the latissimus dorsi myocutaneous flaps were harvested taking care of elevating the implant in continuity with the flaps.

RESULTS
 Histological examination revealed the presence of bone tissue in the implants loaded with cells. Ceramics implanted without cells showed formation of vascularized loose connective tissue. A "simple" myocutaneous flap was thus transformed in a composite osteomyocutaneous flap. We called this flap "the biotechnological prefabricated flap" as it was the result of "ex vivo" expanded osteogenic precursor cells and "in vivo" bone tissue neoformation. The shape of the bone flap was exactly the same as the one of the ceramic model used. Possible clinical applications may be the replacement of skeletal defects. The advantages of this procedure are: simple surgical execution, the possibility of pre-shaping the graft to the exact characteristics of the defect and availability of autogenous donor tissue without donor site morbidity. A future aim is to evaluate functional and mechanical properties of neoformed bone and experiments are in process to verify the reliability of this model system in large size animals.

APPLICATION OF N-BUTYLE-CYANOACRYLATE FOR CLOSURE OF SKIN WOUNDS

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Introduction. The possibility of application of tissue adhesive (n-butyle-cyanoacrylate) - Indermil ###- induced us to introduce in our experience this method for closure of skin wounds. *Methods.* We compared results of 5, 10 days, 1 and 3 months post-operative among traditional sutures and applications of n-butyle-cyanoacrylate. Among the indications to the use of cyanoacrylate tissue we included repair of skin wounds under 5-6 cm. of length without tension, not contaminated, not seeping. The application is very easy: the product can be affixed on skin margin. After 20" of pressure on margins it establishes a strong connection that promotes also hemostasis. In case of traumatic lesions, avoiding anesthetic infiltrations makes this method pharmacologically sure and fast. *Results.* We experienced excellent results with n-butyle-cyanoacrylate in the post-operative time; moreover, this method doesn't require stitches removal. Histologic experimental studies, reported in literature, on rat, showed that use of adhesive tissue versus sutures reduced inflammatory infiltration, without development of infections. We always had fast healing with linear margins in absence of infections. Aesthetic results were excellent and similar to results obtained with plastic sutures. *Conclusions.* We support that use of adhesive tissue is an effective alternative to conventional techniques also in pediatrics, where high is the discomfort for the little patients. The good results obtained, although this is only a preliminary experience, support us to continue this application.

- 1) Quinn J., Wells G., Sutcliffe T., Jarmuske M., Maw J., Stiell I., John P.: Tissue adhesive versus suture wound repair at 1 year: randomized clinical trial correlating early, 3 months and 1 year cosmetic outcome. Ann. Emer. Med. 1998 Dec; 32 (6): 645-9.
- 2) Vanholder R., Misotten A., Roels H., Matton G.: Cyanoacrylate tissue adhesive for closing skin wounds: a double blind randomized comparison with sutures. Biomaterials 1993 Aug, 14 (10): 737-42.

IMPLANTS AND PROSTHESIS IN CRANIOFACIAL EXTRAORAL REHABILITATION

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Introduction. Since several years we are using with success extraoral osteointegrated implants in the management of complex craniofacial defects. For this treatment main indications are particular complexity, previous unsuccessful surgical operations and poor general conditions that do not allow general anaesthesia.

Methods. Extraoral osseo-integration concepts and techniques are essentially the same as intraoral implantology. Three dimensional reconstructions of computed tomography (3D CT) are been used for a better clinical and therapeutic planning of complex craniofacial reconstructions in order to obtain a comprehensive evaluation of the skeletal of the soft tissue alterations. Accurate surgical preoperative planning makes also prosthetic treatment easier.

Results. The authors report the long-term follow-up of the osseointegrated facial rehabilitation. Radiological and scintigraphical (SPECT Tc-99m-MDP) findings demonstrate that osteointegration process of the fixtures and bone healing are the same as that in intraoral implantology.

References. 1)Branemark PI, Hansson BO et al. Osseointegrated implants in the treatment of the edentulous jaw: experience from a 10 year period. Scand J Plast Reconstr surg 1977;16:1. 2)Eriksson E, Branemark PI. Osseointegration from the perspective of the plastic surgeon. Plast Reconstr Surg 1994;93:626.

The repair of nasal defects with local flaps avoiding reshaping procedures: indications and techniques

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One of the most used techniques for the repair of nasal defects after tumor excision consists on local cutaneous-subcutaneous flaps.

The main characteristic of these flaps is their versatility, because they offer many reconstructive options, by changing their locations and planning. The use of such flaps may need a second operation of reshaping after the stabilization of the circulation from the surrounding tissues. The reshaping can often be avoided by using particular surgical techniques in planning and harvesting these flaps.

We carried out a retrospective study from 1985 to 1998 checking the hospitalised patients with skin defects of the nose after tumours excision, repaired with local flaps. In almost all the cases in which we have used the aforementioned techniques the second operation of reshaping was avoided.

HYPOGLOSSAL-FACIAL NERVE ANASTOMOSIS TRANSFERRING THE ANSA HYPOGLOSSI TO THE HYPOGLOSSAL TRUNK

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INTRODUCTION

In recent facial palsy (within one year from nerve interruption) hypoglossal-facial nerve anastomosis allows the facial nerve territory reinnervation with good aesthetic and functional results.

MATERIALS AND METHODS

From 1992 to 1997 eighteen patients were treated using hypoglossal- facial nerve anastomosis.

In a first group of eight patients a classic direct hypoglossal-facial nerve anastomosis was used. In a second group of ten patients the ansa hypoglossi (motor branch to Sterno-hyoid, Sterno-thyroid and Omo-hyoid muscles) was resected and sutured to the descendent hypoglossi distal portion to obtain a sort of tongue reinnervation, while the main trunk was sutured to the facial nerve, but the poor reinnervation given by the ansa fibers, discouraged further attempts.

In the past some Authors proposed a facial territory reinnervation by the ansa hypoglossi. On the other hand, this experience suggested the use of the ansa hypoglossi in order to obtain some tongue reinnervation.

Seven patients out of the second group of ten patients were evaluated. The follow up of the other three is still too short.

DISCUSSION

The rational of this method is that a fresh resected nerve stump exerts a chemotaxis on the ansa regenerating nervous fibres while a degenerated facial nerve could not have this kind of action.

Besides, the ansa fibres, that are appointed to Sterno-hyoid, Sterno-thyroid and Omo-hyoid muscles, are more suitable than others to provide the tongue muscles.

Since some cross-over tongue reinnervation is supposed, we have tried to enrich reinnervation of the tongue in order to reduce the discomfort after hypoglossal resection.

CONCLUSION

In our experience the patients treated with the ansa hypoglossi show:

- a facial muscles good reanimation with only minor problems in mimic movements
- a sufficient function of the tongue muscles with less problems in speaking, chewing and swallowing.

All this permits an acceptable aesthetic appearance and a normal relation life therefore we advocate it as a valid method to solve the recent facial nerve palsy

Prognostic factors in soft tissue sarcomas

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Soft tissue sarcomas are comparatively rare neoplasms; their incidence does not exceed 1% of all adult tumors and 7% of tumors that arise under the age of 25 years. They cause 2% of total deaths for cancer in the world. The disease has a mortality rate of 50%, which is 10 times greater than that for testicular cancer, a neoplasm with a similar incidence. This mortality rate is related, in part, to the tendency to adjacent tissue invasion and distant metastases. The research of new prognostic factors should be the aim of new studies in order to identify patients at high risk for disease recurrence and death, who need a wide surgical excision or adjuvant therapies.

Our retrospective study consists of 46 patients (25 males, 21 females) with soft tissue sarcomas, treated in the Department of Plastic Surgery of the "Università Cattolica del Sacro Cuore", in Roma. Multivariate analysis of potential prognostic factors showed that extracompartmental tumor location is the only statistically significant factor increasing the risk of local recurrences, confirming that tumor size is one of the most reliable prognostic factors in soft tissue sarcomas.

OUR EXPERIENCE IN THE TREATMENT OF PROGRESSIVE HEMIFACIAL ATROPHY (ROMBERG'S DISEASE)

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INTRODUCTION

The treatment of progressive hemifacial atrophy is a difficult task. Different surgical solutions have been proposed on the base of its clinical seriousness.

MATERIAL AND METHODS

Three patients severely affected by Romberg's disease have been observed and then submitted to surgery in the last four years. Their progressive hemifacial atrophy involved all the facial tissues (skin, subcutaneous fatty tissue, muscles and bone). The three patients (aged twelve, twentyone and thirtyfive) have been treated with the same technique: a free microvascular preplanned composite Scapular-Parascapular flap. In two patients the reconstruction has been performed in one stage without any further aesthetic revision. In one case, in which the disease appeared at seven, a bone graft has been necessary to correct the atrophic zigoma, and a rhinoplasty to reshape the nose.

DISCUSSION AND CONCLUSION

The choice of the flap optimally suggested by Urbaniak has completely fulfilled our expectation restoring a permanent facial contour. This allowing the patients to improve their psychological conditions and to restore a normal lifestyle.

OUR APPROACH TO THE SURGICAL MANAGEMENT OF CLINICAL STAGE Ist MELANOMA PATIENTS: current guidelines

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INTRODUCTION

Clinical stage Ist Melanomas usually present to the plastic surgeon just as other minor lesions of the skin, that are most often eradicated simply with excisional biopsies on an outpatient basis. Nevertheless, the malignity and rapid development of melanomas and the increased risk for a systemic disease bound the surgeon to a more careful diagnoses of these lesions and to a more complex management of the patient suspected for an early melanoma. The problems the surgeon faces everyday with surgery of melanoma are in fact multiple and generally consists in :

- 1) Performing an early clinical diagnoses of melanoma and of its stage (thickness, width, ulceration, LNF involvement, etc.)
- 2) Performing a radical local excision, while safeguarding cosmesis (especially in children, women or particular sites as face, hands, etc).
- 3) Reducing the number of surgical procedures necessary to complete the treatment.
- 4) Choosing the least traumatic anesthesiology technique to reduce the immunological stress of the patient (local /ev sedation).
- 5) Avoiding psychological stress to the patient until the diagnoses is confirmed by anapat. report.
- 6) Basing surgical strategy on definitive pathology report and avoid the variability due to extemporary reports (false + or false -).

7) Using latest techniques available for the early diagnoses of nodal involvement (Tirosinase, gamma probe).

METHODS

Basing on the experience of the Center for the diagnosis and treatment of Melanoma of the Institute of Dermatology and Plastic Surgery of the University of Rome "La Sapienza", we have set up a protocol for the diagnoses and early treatment of clinical stage Ist melanomas.

RESULTS AND CONCLUSIONS

Since 1994 we have treated 450 patients for primary skin melanoma, 380 of which were < 1mm. of thickness sec. Breslow. In the 70 patients affected by melanomas > 1 mm and negative for clinical node involvement, a SLND has been performed with a S. node excision rate of 97%. In the last 27 patients the availability of the gamma probe has further increased the sensibility and specificity of this method (>98%). No local recurrences after surgery have been observed. Up to date, the mortality rate of patients with melanomas < 1 mm. has been 0%, while in SL neg. patients has been 2%. The mortality rate of SL posit. patients has been 8%. The free disease survival of SL posit. patients has been 77%, while the survival of patients that have further developed nodal metastasis has been 15%. Our results, though still preliminary, seem comparable to those reported in literature and therefore encourage us to continue to use and furthermore improve this protocol.

ANALYSIS OF 70 QUADRANTECTOMIES WITH RECONSTRUCTION

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Introduction. Plastic reconstruction of the breast after QUART is less popular than reconstruction after mastectomy. Our patient series consists of 70 quadrantectomy defects repaired between 1987 and 1989.

Methods. 67 patients were treated by quadrantectomy and radiotherapy and with immediate reconstruction while three of them underwent bilateral quadrantectomies with breast remodelling. In 62 of them, reconstruction used techniques of mastopexy, breast augmentation, autologous flap transfer. In the other five patients, the breast with superior-external QUART was not corrected while the contralateral was reduced by a mirror quadrantectomy without using plastic surgery technique. We reconstructed 23 superior-external quadrants, 22 central quadrants, 13 inferior quadrants and 5 superior quadrants with the following procedures: 46 mastoplasties, 11 prosthesis implants, 4 latissimus dorsi myocutaneous flaps, and 2 TRAM flaps. In 9 patients a mirror quadrantectomy using a mastoplasty technique was carried out.

Results. Results were generally satisfying in most cases except for a few delayed reconstructions after radiotherapy. Complications were registered in 9 of 11 cases with prosthesis. Seven of them underwent further operations consisting in 3 TRAM reconstructions, 2 capsulectomies and prosthesis exchange, 1 prosthesis removal, and 1 latissimus dorsi flap reconstruction. Only one case repaired by remodelling was reoperated using a crescent-shape implant.

Conclusion. Our average follow-up was 4 years with a range between 3 months and 11 years. From the collected data mammaplasty is the ideal technique. In central quadrant cases this procedure is unique, in other quadrants is the first choice while the second is myocutaneous flap. The outcome of breast implants was negative because of the tissue conditions, which were damaged by radiotherapy even if there were no evidence of radiodermatitis. However, in our series, implant device has been the first choice only for correction of the superior quadrants.

“Vela quadra” flap in median nerve injuries at the wrist.

Anatomy, clinical considerations, our experience in twenty cases.

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Following the observations of several anatomical studies on the vascularisation of the upper limb, the authors propose an innovative fascious-adiposus flap at the wrist. The fat pad of pronator quadratus lies over the muscle, vascularized by a recurrent branch arising from the anastomotic carrefour of anterior interosseous, radial and cubital arteries, in correspondence of radio-carpal joint. The peripheral expansions of the adipose tissue have to be anchored to the volar fascia of the pronator quadratus in order to lift up the flap as a “square sail”. The flap is then distally rotated in order to cover the traumatized median nerve segment at the wrist, for 1-2,5 cm of length.

The authors present clinical applications of vela quadra flap in the treatment of median nerve painful neuromas at the wrist, where traumatic and iatrogenic injuries frequently occur. The surgical procedure consists of external neurolysis associated with nerve covering by the vascularised flap.

The results confirm the validity of vascularized fat flaps in order to create the best peri-neural environment in terms of biological and mechanical point of view, as well as the advantages offered by this local flap, which turned out to be well vascularized and to be fast realizable. The rotational flap is able to cover, for its limited length, the median nerve at carpal tunnel level only: indications are therefore very selective but not uncommon, due to the frequency of median nerve injuries at this level.

Clinical results are convincing: among the first twenty cases it has always been observed a sintomatic resolution, sometimes amazing, of the algodistrofic and causalgic symptomatology, associated to neurological deficit improvement, obviously conditioned by the severity of the initial nerve injury. The improvement was not only subjective and clinically evident, but in ten cases it was also proved by E.M.G. testing. In three cases it has been the possibility, after 6 months - 1 year from surgery, to perform an M.R. that confirmed a persistently good flap vascularisation.

Mininvasive approach in plastic surgery: endoscopic capsulotomy

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Introduction

Clinical use of breast endoscopy, already described by some authors several years ago for the evaluation of the implant integrity and surgical approach of capsular contracture, represents a reliable alternative to the direct open capsulotomy in plastic surgery, since a short cutaneous incision (< 1 cm) can be made with shorter recovery time and minor surgical invasiveness.

Aims of study

The therapeutical efficacy of this procedure is comparable to the open technique, offering additional advantages: implant permanence on the spot - therefore its replacement is not necessary, on the contrary of the open capsulotomy, with lower costs - effective visualization of implant and capsule, operative safety and rapidity, minor surgical invasiveness, decreased complications, shorter recovery time and hospitalization and, therefore, lower recovery costs and reduced discomfort for the patient.

Methods

Surgical equipment used in plastic surgery consists of the same video devices used in gas-less surgery, urology, orthopedics, opportunely adjusted to perform video assisted plastic surgery.

An useful instrument suitable for endoscopic capsulotomy technique is the structural balloon trocar: in fact, on its top, it is provided with a transparent insufflable (by CO₂) membrane, which allows to spread the periprotetic capsule, therefore being displaced from the implant, and to create an operative cavity for the optic, without using a retractor and a gas technique.

Results

The capsulotomy can be made under direct vision rapidly and accurately by the introduction of a special resector.

This kind of surgical approach is suitable for all patients that are candidates to the open method, but is not realizable when an implant replacement is necessary. Implant type is not a limit to the described technique.

A DIFFERENT APPROACH IN PLACING TISSUE EXPANDER WITH MINI-INVASIVE TECHNIQUE

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To place subcutaneous expanders, using mini-invasive video endoscopic technique, in the post exeresis tissue reconstruction of cutaneous neoformations, tumors and in skin cicatricial results, burn results, loss of substantia, is one of the elective indications of this method in plastic surgery. The use of the videoendoscopic method in positioning tissue expanders offers mini-invasive surgery benefits: best haemostasis control during operation, reduction of post-operative pain, of post surgical complications and hospitalization. Moreover we can prepare a suitable subcutaneous pocket through only a cutaneous incision of one centimetre.

With this technique is possible to begin tissue expansion immediately after surgical operation without risking the decubitus of the expander and without waiting 15 days usually necessary for cutaneous inlet cicatrization. So expansion time and connected complications drastically decrease with a therapeutical effectiveness equal to the traditional technique.

FREE COMPOSITE OSSEOMYOCUTANEOUS FLAP OF LATISSIMUS DORSI, SERRATUS ANTERIOR AND RIB FOR OROMANDIBULAR RECONSTRUCTION

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Introduction: A wide variety of osseomyocutaneous free flaps for mandibular reconstruction has been described. The flap made up of latissimus dorsi, serratus anterior and rib (LSRF), first described by Harii et al., can provide vascularized skin, muscle, bone, and cartilage on a single thoracodorsal vascular pedicle and results useful in some circumstances, i.e.: large soft tissues defects.

Methods: In this paper we describe two cases in which the LSRF has been chosen for reconstruction of the mandible, cheek and intraoral mucosa, following major ablation of malignant tumours.

Conclusion: In our experience this flap had excellent performance in soft tissue repair and fitted the basic requirements of bony restoration. Moreover, the donor site morbidity was minimal and its dissection requires a common skill. The LSRF can be the first choice in certain reconstructive circumstances.